

R. Mitra

Re-run

14
Entered
8/22/01

RAW SEQUENCE LISTING

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:18

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

4 <110> APPLICANT: Jerry Pelletier
 5 Philippe Gros
 6 Michael DuBow
 8 <120> TITLE OF INVENTION: DNA SEQUENCES FROM STAPHYLOCOCCUS AUREUS
 9 BACTERIOPHAGE 77 THAT ENCODE ANTI-MICROBIAL POLYPEPTIDES
 12 <130> FILE REFERENCE: 241/190US
 14 <140> CURRENT APPLICATION NUMBER: 09/407,804A
 15 <141> CURRENT FILING DATE: 1999-09-28
 17 <150> PRIOR APPLICATION NUMBER: 60/110,992
 18 <151> PRIOR FILING DATE: 1998-12-03
 20 <160> NUMBER OF SEQ ID NOS: 29
 22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 10
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
 29 <400> SEQUENCE: 1
 30 gcgtcgaccg 10
 32 <210> SEQ ID NO: 2
 33 <211> LENGTH: 20
 34 <212> TYPE: DNA
 35 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
 37 <400> SEQUENCE: 2
 38 tattatccaa aacttgaaca 20
 40 <210> SEQ ID NO: 3
 41 <211> LENGTH: 20
 42 <212> TYPE: DNA
 43 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
 45 <400> SEQUENCE: 3
 46 cggtggtata tccagtgt 20
 48 <210> SEQ ID NO: 4
 49 <211> LENGTH: 714
 50 <212> TYPE: DNA
 51 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
 58 <400> SEQUENCE: 4
 59 atgacgcata atatagaaaa acgcattaat aaattaaaaa cttctggaaa tccaaaattt 60
 60 aaaaagttag attcagatat tcactattta ctcaagagat ttgaagggtga aaaaaccat 120
 61 aaaggttttt atccaaagt taaacaagga gaaatagttt ttgttagattt cggtataaac 180
 62 gttaataaag aatttttctaa ttcacacttt gcaatagtga tgaataaaaa tgattctaatt 240
 63 acggagggata tagtaaatgt tattccctta tcctctaaag aaaacaaaaa gtattttaaag 300
 64 atgaattttg atttgaaaatg ggagtattat ttaagattgt ttttaaat ttaattagcgcg 360
 65 caaaaataatt cagctatatatt aaaagaagtt ttcgataaaa aataccaaaa aaacaacaca 420
 66 gaattcatca ctaaaagatta ttttattgaa tttatatctg atagttttaga aattgaaaat 480
 67 aaattaaata aaattgacag aaacattaat aacatagtat cagcaattga taaggtaaaa 540
 68 aaattaaaag gtaatagtta cgcttgcata aattctttcc agccgattag taagtttcgc 600
 69 ataagaaaag ttttacccca aaaaattaaa aatccagtaa tagattcttc ggatattatg 660
 70 ttactgataa atagaattaa taataatata ttgcagatcc ctgatataag atga 714

ENTERED

RAW SEQUENCE LISTING

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:18

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

```

72 <210> SEQ ID NO: 5
73 <211> LENGTH: 651
74 <212> TYPE: DNA
75 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
77 <400> SEQUENCE: 5
78 atgaacgagc aaataatagg aagcatatat acttttagcag gaggtgttgt gctttattca 60
79 gttaaagaga ttttttaggta ttttacagat tctaacttac aacgtaaaaa aatcaattta 120
80 gaacaaatat atccgatata ttttagattgt tttaaaaagg ctaaaaagat gattggagct 180
81 tatattattc caacagaaca gcatgaattt ttagattttt ttgataattga agtctttaat 240
82 aatttagata agcaaagtaa aaaagcgtat gaaaatgtta ttggatttag acaaatgatt 300
83 aatttatcaa atagagttaa ggcaatggaa gattttaaga tgagtttcaa caatgaattt 360
84 agtacaaatc agattttttt taatccttct tttgttatgg aaacaattgc tattataaat 420
85 gaatatcaaa aagatatatc ttattttaa aaatataatta ataaaatgaa tgaaaataga 480
86 gcttataatc atattgatag ttttatcact tcagagtacc gacgaaaaat aaacgattat 540
87 aatctttatc ttgataaatt tgaagaacag tttagtcaaa agtttaaaat aaacagaact 600
88 tcgataaaaag aaagaattat tattaattta aacaagagga gatttaaatg a 651
90 <210> SEQ ID NO: 6
91 <211> LENGTH: 261
92 <212> TYPE: DNA
93 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
95 <400> SEQUENCE: 6
96 atgtattacg aaataggcga aatcatacgc aaaaatattc atgttaacgg attcgatttt 60
97 aagctattca ttttaaaagg tcatatgggc atatcaatac aagttaaaga tatgaacaac 120
98 gtaccaatta aacatgctta tgtcgtagat gagaatgact tagatatggc atcagactta 180
99 ttttaaccaag caatagatga atggattgaa gagaacacag acgaacagga cagactaatt 240
100 aacttagtca tgaaatggta g 261
102 <210> SEQ ID NO: 7
103 <211> LENGTH: 162
104 <212> TYPE: DNA
105 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
107 <400> SEQUENCE: 7
108 atgagcaaca tttataaaaag ctacctagta gcagtattat gcttcacagt cttagcgatt 60
109 gtacttatgc cgtttctata cttcactaca gcatgggtcaa ttgctgggatt cgcaagtatc 120
110 gcaacattca tgtactacaa agaatgcttt ttcaaagaat aa 162
115 <210> SEQ ID NO: 8
116 <211> LENGTH: 159
117 <212> TYPE: DNA
118 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
120 <400> SEQUENCE: 8
121 atggtaacca aagaattttt aaaaactaaa cttgagtgtt cagatatgta cgctcagaaa 60
122 ctcatagatg aggcacaggg cgatgaaaat aggttgtacg acctatttat ccaaaaactt 120
123 gcagaacgtc atacacgccc cgctatcgtc gaatattaa 159
125 <210> SEQ ID NO: 9
126 <211> LENGTH: 297
127 <212> TYPE: DNA
128 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
130 <400> SEQUENCE: 9
131 atgttcaata taaaacgaaa aacggaggaa gtcaagatgt attacgaaat aggcgaaatc 60
132 atacgcaaaa atattcatgt taacggattc gattttaagc tattcatttt aaaaggtcat 120

```

RAW SEQUENCE LISTING

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:18

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

```

133 atgggcatat caatacaagt taaagatatg aacaacgtac caattaaaca tgcttatgtc 180
134 gtagatgaga atgacttaga tatggcatca gacttattta accaagcaat agatgaatgg 240
135 attgaagaga acacagacga acaggacaga ctaattaact tagtcatgaa atggtag 297
137 <210> SEQ ID NO: 10
138 <211> LENGTH: 41708
139 <212> TYPE: DNA
140 <213> ORGANISM: Staphylococcus aureus bacteriophage 77
142 <400> SEQUENCE: 10
143 gatcaaaaata cttggggaac ggttagggag taaacttcgc gataatttta aaaattcatg 60
144 tataaccccc ctcttataac cattttaagg caggatgatga aatggagatt atagtcgatg 120
145 aaaatttagt gcttaaagaa aaagaaaggc tacaagtatt atataaagac atacctagca 180
146 ataaattaaa agtagttgat ggtttaatta ttcaagcagc aaggctacgt gtaatgcttg 240
147 attacatgtg ggaagacata aaagaaaaag gtgattatga tttatttact caatctgaaa 300
148 aggcgccacc atatgaaagg gaaagaccag tagccaaact atttaatgct agagatgctg 360
149 catatcaaaa aataatcaaa caattatcgg atttattgcc cgaagagaaa gaagacacag 420
150 aaacgccatc tgatgattac ctatgattag taataaatac gttgatgaat atataaattt 480
151 gtggaaacaa ggaaagataa ttttaaataa agaaagaatt gatctcttta attatctaca 540
152 aaacatata tattcacgag atgatgtata ttttgatgaa cagaaaatcg aggattgtat 600
153 caaatttatt gaaaaatggt attttccaac attaccattt caaaggttta tcatagctaa 660
154 tatatttctt atagataaaa atacagatga agctttcttt acagaatttg ctattttcat 720
155 gggacgtgga ggcgggaaaa acggtctaata aagtgtctatt agtgattttc tttctacgcc 780
156 cttacacgga gttaaagaat atcacatctc cattgttgct aatagtgaag atcaagcaaa 840
157 aacatcgttt gatgaaatca gaaccgtttt aatggataac aaacgaaata agacgggtaa 900
158 aacgccaaaa gtccttatg aagttagtaa agcaaaaaata ataaaccgtg caactaaatc 960
159 ggttattcga tataacacat caaacacaaa aaccaaagac ggtggacgtg aggggtgtgt 1020
160 tatttttgat gaaattcatt atttcttttg tcctgaaatg gtaaacgtca aacgtggtgg 1080
161 attaggtaaa aagaaaaata gaagaacgtt ttatataagt actgatggtt ttgttagaga 1140
162 ggggttatatc gatgcaatga agcacaaaat tgcaagtgtg ttaagtggca aggttaaaaa 1200
163 tagtagattg tttgcttttt attgtaaagt agacgatcca aaagaagttg atgacagaca 1260
164 gacgtgggaa aaggcgaacc caatgttaca taaaccgtta tcagaatacg ctaaaacact 1320
165 gctaagcacg attgaagaag aatataacga tttaccattc aaccgttcaa ataagcccga 1380
166 attcatgact aagcgaatga atttgcctga agttgacctt gaaaaagtaa tagcaccatg 1440
167 gaaagaaata ctagcgacta atagagagat accaaattta gataatcaa tgtgtatttg 1500
168 tggtttagac tttgcaaca ttcgagattt tgcaagtgtg gggctattat tccgaaaaaa 1560
169 cgatgattac atttggttag gacattcgtt tgtaagacaa gggtttttg atgatgtcaa 1620
170 attagaacct cctattaaag aatgggaaaa aatgggatta ttgaccattg tcgatgatga 1680
171 tgtcattgaa attgaatata tagttgattg gtttttaaag gctagagaaa aatatgggct 1740
172 tgaaaaagtc atagctgata attatagaac tgatattgta agacgtgcgt ttgaggatgc 1800
173 tggcataaaa cttgaagtac ttagaaatcc aaaagcaata catggattac ttgcaccacg 1860
174 tatcgataca atgtttgcga aacataacgt aatatatgga gacaatcctt tgatgcgttg 1920
175 gtttactaat aatgttgctg taaaaatcaa gccgatgga aataaagagt atatcaaaaa 1980
176 agatgaagtc agacgtaaaa cggatggatt catggctttt gttcacgcat tatatagagc 2040
177 agacgatata gtagacaaa acatgtctaa agcgcttgat gcattaatga gtatagattt 2100
178 ctaatagagg aggtgagaca tgagtattct agaaaagata tttaaaacta ggaaagatat 2160
179 aacatatatg cttgatttag atatgataga agatctatca caacaagcgt atgtgaaacg 2220
180 tttagcgatt gatagttgta ttgaatttgt tgcgcgagct gtcgctcaaa gtcattttta 2280
181 agtattggaa ggtaaatagaa ttcaaaaagaa tgatgtttac tacaagttaa atataaaacc 2340
182 aaatactgac ttatcaagcg atagtttttg gcaacaagtt atatataaac taatttatga 2400
183 taacgaggtt ttaatcgtag taagtgcag caaagaatta cttatcgtag atagctttta 2460

```

RAW SEQUENCE LISTING

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:18

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

```

184 cagagaagag tacgctttgt atgatgatat attcaaagat gtaacgggta aagattatac 2520
185 ttatcaacgt actttcacaa tgcaagaggt catatattta aagtacaaca acaataaagt 2580
186 gacacacttt gtagaaagtc tattcgaaga ttacgggaaa atattcggaa gaatgatagg 2640
187 tgcacaatta aaaaactatc aaataagagg gattttgaaa tctgcctcta gcgcatatga 2700
188 cgaaaagaat atagaaaaat tacaagcggt cacaaataaa ttattcaata cttttaataa 2760
189 aaatcaacta gcaatcgcg ctttgataga aggttttgat tatgaggaat tatctaattg 2820
190 tggtaagaat agtaacatgc ctttttctga attgagtgag ctaatgagag atgcaataaa 2880
191 aaatgttgcg ttgatgattg gtatacctcc aggtttgatt tacggagaaa cagctgattt 2940
192 ggaaaaaaac acgcttgat ttgagaagtt ctgtttaaca cctttattaa aaaagattca 3000
193 gaacgaatta aacgcgaaac tcataacaca aagcatgtat ttgaaagata caagaataga 3060
194 aattgtcggg gtgaataaaa aagaccact tcaatatgct gaagcaattg acaaaacttg 3120
195 aagttctggg tcatttacaa ggaatgaggt gcggattatg ttaggtgaag aaccatcaga 3180
196 caatcctgaa ttagacgaat acctgattac taaaaactac gaaaaagcta acagtgggta 3240
197 aaatgatgaa aaagaaaaag atgaaaacac tttgaaaggt ggtgatgaag atgaaagcgg 3300
198 agattaaagg cgtcatcggt tccaacgaag ataaatgggt ttacgaaatg cttgggatgg 3360
199 attcgacttg tcctaaagat gttttaacac aactagaatt tagtgatgaa gatgttgata 3420
200 ttataattaa ctcaaattgg ggtaacctag tagctggtag tgaaatatat acacatttaa 3480
201 gagctcataa aggcaaaagt aatgttcgta tcacagcaat agcagcaagt gcggcatcgc 3540
202 ttatcgcaat ggctggtgac cacatcgaaa tgagtcgggt tgctagaatg atgattcaca 3600
203 atccttcaag tattgcgcaa ggagaagtga aagatctaaa tcatgctgca gaaacattag 3660
204 aacatgttgg tcaataaatg gctgagggat atgcgggttag agctggtaaa aacaaacaag 3720
205 aacttataga aatgatggct aaggaaacgt ggctaaatgc tgatgaagcc attgaacaag 3780
206 gttttgcgga tagtaaaatg tttgaaaacg acaatatgca aattgtagca agcgatacac 3840
207 aagtgttatc gaaagatgta ttaaactcgt taacagcttt ggtaagtaaa acgccagagg 3900
208 ttaacattga tattgacgca atagcaaata aagtaattga aaaaataaat atgaaagaaa 3960
209 aggaatcaga aatcgatgtt gcagatagta aattatcagc aaatggattt tcaagattcc 4020
210 ttttttaata caaaaatagg aggtcataaa atgactataa atttatcgga aacattcgca 4080
211 aatgcgaaaa acgaatttat taatgcagta aacaacgggtg aaccgcaaga aagacaaaat 4140
212 gaattgtacg gtgacatgat taaccaacta tttgaagaaa cttaaattaca agcaaaagca 4200
213 gaagctgaaa gagtttctag tttacctaaa tcagcacaaa ctttgagtgc aaaccaaaaga 4260
214 aattttctta tggatatcaa taagagtgtt ggatataaag aagaaaaact tttaccagaa 4320
215 gaaacaattg atagaatctt cgaagattta acaacgaatc atccattatt agctgactta 4380
216 ggtattaaaa atgctggttt gcgtttgaag ttcttaaaat ccgaaacttc tggcgtggct 4440
217 gtttggggta aaatctatgg tgaaattaaa ggtcaattag atgctgcgtt cagtgaagaa 4500
218 acagcaattc aaaataaatt gacagcggtt gttgttttac caaaagattt aaatgatttt 4560
219 ggtcctgcgt ggattgaaaag atttgttcgt gttcaaatcg aagaagcatt tgcagtggcg 4620
220 cttgaaaactg cgttcttaaa aggtactggg aaagaccaac cgattggctt aaaccgtcaa 4680
221 gtacaaaaag gtgtatcggt aactgatggg gcttatccag agaaagaaga acaaggtagc 4740
222 cttacatttg ctaatccgcg cgctacgggt aatgaattga cgcaagtgtt taaataccac 4800
223 tcaactaacg agaaaggtaa atcagtagcg gttaaaggta atgtaacaat ggttgtaaat 4860
224 ccgtccgatg cttttgaggt tcaagcacag tatacacatt taaatgcaa tggcgtatat 4920
225 gttactgctt taccatttaa tttgaatgtt attgagtcta cagttcaaga agcaggtaag 4980
226 gttttaacgt acgttaaagg tctatatgat ggttatttag ctggtggat taatgttcag 5040
227 aaatttaaa gaaacattgc gttagatgat atggatttat acactgcaaa acaatttgct 5100
228 tacggcaaa gaaaagataa taaagttgct gctgtttgga aattagattt aaaaggacat 5160
229 aaaccagctt tagaagatac cgaagaaaca ctataaaatt ttatgaggtg ataaaatggg 5220
230 gaaattttaa gttgttagag aatttaaaga catagagcac aatcaacaca agtacaaagt 5280
231 aggggagttg tatccagctg aagggtataa caatcctcgt gttgaattgt tgacaaatca 5340
232 aatcaaaaaa aagtacgaca aagtttatat cgtaccttta gataagctga caaaacaaga 5400

```

RAW SEQUENCE LISTING

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:18

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

```

233 attattagaa ctatgcgaat cattacaaaa aaaagcgtct agttcaatgg ttaaaagtga 5460
234 aatcatcgac ttattgaatg gtgaagacaa tgacgattga tgatttgctt gtcaaattta 5520
235 aatcacttga aaagattgac cataattcag aggatgagta cttaaagcag ttgttaaaaa 5580
236 tgtcgtacga gcgtataaaa aatcagtgcg gagtttttga attagagaat ttaataggtc 5640
237 aagaattgat acttatacgc gctagatatg cttatcaaga tttattagaa cacttcaacg 5700
238 acaattacag acctgaaata atagattttt cgttatctct aatggaggta tcagaagatg 5760
239 aagaaagtgt ttaagaaacc tagaattaca actaaacggt taaatacgcg tgttcatttt 5820
240 tataagtata ctgaaaaataa tgggtccagaa gctggagaaa aagaagaaaa attattatat 5880
241 agctgttggg cgagtattga tgggtgtctgg ttacgtgaat tagaacaagc tatctcaaac 5940
242 ggaacgcaaa atgacattaa attgtatatt cgtgatccgc aagggtgatta tttacccagt 6000
243 gaagaacatt atcttgaaat tgaatcaaga tatttcaaaa atcgtttgaa tataaagcaa 6060
244 gtatcaccag atttggataa taaagacttt attatgattc gcggaggata tagttcatga 6120
245 gtgtgaaagt gacaggtgat aaagcattag aaagagaatt agaaaaacat tttggcataa 6180
246 aagagatggt aaaagttcaa gataaggcgt taatagctgg tgctaaggta attggtgaag 6240
247 aaataaaaaa acaactcaaa ccttcagaag actcaggagc actgattagt gagattggtc 6300
248 gtactgaacc tgaatggata aaggggaaac gtactgttac aattagggtg cgtgggcctt 6360
249 ttgaacgatt tagaatagta catttaattg aaaatggtca tgttgagaaa aagtcaggaa 6420
250 aattttgtaa acctaaagct atgggtggga ttaatagagc aataagacaa gggcaaaata 6480
251 agtattttga gacgctaaaa agggagttga aaaaattgtg attgatattt tgtacaaagt 6540
252 tcatgaagtg attagtcaag acagaattat tagagagcac gtaaataatca ataattataa 6600
253 gttcaataaa taccctaattg taaaagatac tgatgtacct tttattgtta ttgacgatat 6660
254 cgacgacca atacctacaa cttatactga cggagatgag tgtgcatata gttatattgt 6720
255 ccaaatagat gtttttgta agtacaatga tgaatataat gcgagaatca taagaaataa 6780
256 gatattctaat cgcattcaaa agttattatg gtctgaacta aaaatgggaa atgtttcaaa 6840
257 tggaaaaccg gaatatatag aagaatttaa aacatataga agctctcgcg tttacgaggg 6900
258 cattttttat aaggaggaaa attaaatggc agtaaaacat gcaagtgcgc caaaggcgta 6960
259 tattaacatt actggtttag gtttcgctaa attaacgaaa gaaggcgcg aattaaaata 7020
260 tagtgatatt acaaaaaaaa gaggattaca aaaaattggt gttgaaactg gtggagaact 7080
261 aaaaacagct tatgctgatg gcggtccaat tgaatcaggg aatacagacg gagaaggtaa 7140
262 aatctcatta caaatgcatg cgttccctaa agagattcgc aaaaattgtt ttaatgaaga 7200
263 ttatgatgaa gatggcgttt acgaagagaa acaaggtaaa caaaacaatt acgtagctgt 7260
264 atggttcaga caagagcgta aagacggtac atttagaaca gttttattac ctaaagttat 7320
265 gtttacaaat cctaaaatcg atggagaaac ggctgagaaa gattgggatt tctcaagtga 7380
266 agaggttgaa ggtgaggcac ttttcccttt agttgataat aaaaagtcag tacgtaagta 7440
267 tatctttgat tcagctaaca tgacaaatca tgatggagac ggtgaaaaag gcgaagaggc 7500
268 tttcttaaaag aaaatttttag gcgaagaata tactggaaac gtgacagagg gtaacgaaga 7560
269 aactttgtaa caaaaccggc ttcatcgga actgcggtta agtcggttaa tataccagat 7620
270 agcattaaaa cacttaaagt tggcgacaca tacgatttaa atgttgtagt agagccatct 7680
271 aatcaaagta agttattgaa atacacaaca gatcaaacga atattgtatc aatcaatagt 7740
272 gatggtcaag ttactgcgga agcacaaggc attgctacgg ttaaagcaac agttggtaat 7800
273 atgagtgaac ctataacaat aaatgtagaa gcataagagg gggcaacccc tctattttat 7860
274 ttgaaaataa ggagagtatt ataaaatggc aaaattaaaa cgtaacatta ttcaattagt 7920
275 agaagatcca aaagcaaatg aaattaaatt acaaacgtac ttaacaccac acttcatttc 7980
276 atttgaaatt gtatacgaag caatggattt aatcgatgat attgaggacg aaaatagcac 8040
277 gatgaagcca agagaaatcg ctgacagatt gatggatatg gttgtaaaaa tttacgataa 8100
278 ccaattcaca gttaaagacc taaaagaacg tatgcatgca cctgatggaa tgaatgcact 8160
279 tcgtgaacaa gtgattttca ttactcaagg tcaacaaact gaggaaacta gaaattttat 8220
280 ccagaacatg aaataaagcc tgaagattta acatataaag caatgttgaa aaatatggat 8280
281 actctcatga tggacttaat tgaaaatggt aaagacgcta acgaagtttt aaaaatgcca 8340

```

VERIFICATION SUMMARY

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:19

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

STATISTICS SUMMARY

DATE: 08/22/2001

PATENT APPLICATION: US/09/407,804A

TIME: 13:12:19

Input Set : A:\Pto.amc

Output Set: N:\CRF3\08222001\I407804A.raw

Application Serial Number: US/09/407,804A

Alpha or Numeric: Numeric

Application Class:

Application File Date: 09-28-1999

Art Unit:

Software Application: FastSeq

Total Number of Sequences: 29

Total Nucleotides: 44244

Total Amino Acids: 1477

Number of Errors: 0

Number of Warnings: 0

Number of Corrections: 0

MESSAGE SUMMARY